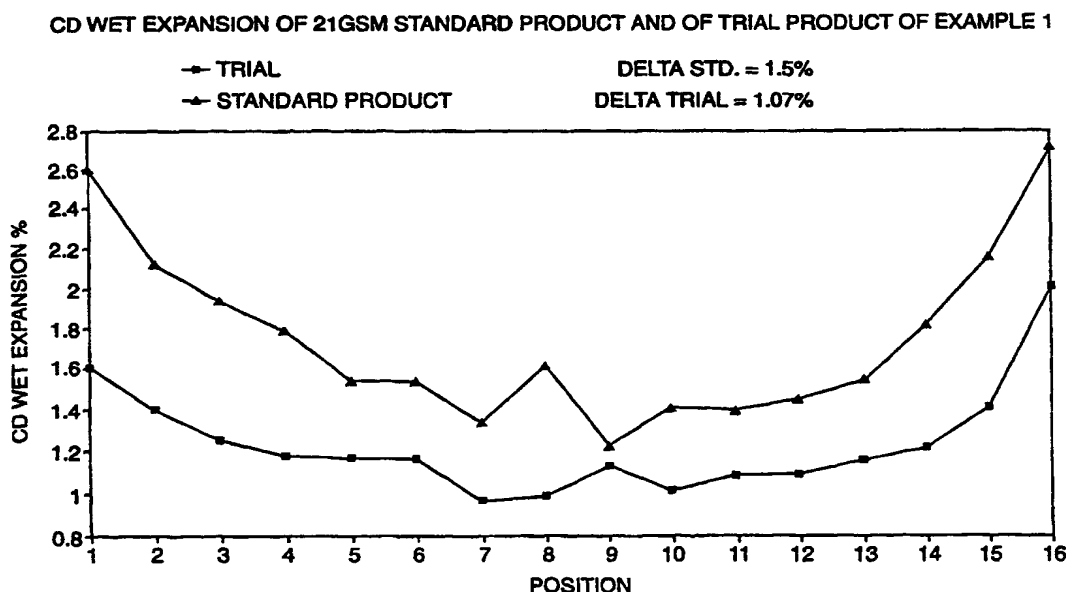




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(21) International Application Number: PCT/GB99/04418 (22) International Filing Date: 23 December 1999 (23.12.99) (30) Priority Data: 99300033.0      5 January 1999 (05.01.99)      EP (71) Applicant (for all designated States except US): DEXTER SPECIALITY MATERIALS, LTD. [GB/GB]; Erskine House, 68-72 Queen Street, Edinburgh EH2 4NP (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): WIGHTMAN, Alan [GB/GB]; 38 Lindisfarne Gardens, Berwick-upon-Tweed, Northumberland TD15 2YA (GB). STONE, Jeremy, James [GB/GB]; Kirkbank, Paxton, Berwick-upon-Tweed, Northumberland TD15 1TE (GB). (74) Agents: DE MINVIELLE-DEVAUX, Ian, Benedict, Peter et al.; Carpmals & Ransford, 43 Bloomsbury Square, London WC1A 2RA (GB).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  Published With international search report.	

(54) Title: PAPER AND RELATED PRODUCTS OF IMPROVED WET EXPANSION PROFILE



## (57) Abstract

Casing paper is produced by the wet-laying of a web material comprising cellulosic fibres, e.g. abaca fibres, and synthetic fibres, the resultant web material being bonded either with viscose, followed by regeneration of cellulose from the viscose, or with a resin binder or mixture of resin binders. The casing paper may be formed into a tube and impregnated with viscose from which cellulose is thereafter regenerated to form a casing material for the packaging of sausage or other processed meat product or other food products. The inclusion of the synthetic fibres, for example polyamide, polyester or polyolefin fibres, has been found to reduce the variation in wet expansion in the cross direction of the web material.

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## INTERNATIONAL SEARCH REPORT

Intern. Application No

PCT/GB 99/04418

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A22C13/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A22C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 10190 A (J.R. CROMPTON LTD.) 20 April 1995 (1995-04-20) page 4, paragraph 5 -page 5, paragraph 3 page 5, paragraph 7 -page 6, paragraph 3 page 6, paragraph 8 -page 7, paragraph 5; claims 1-35; examples 1-4	1-21
Y	EP 0 819 725 A (VISKASE CORPORATION) 21 January 1998 (1998-01-21) the whole document	1-21
Y	EP 0 531 097 A (THE DEXTER CORPORATION) 10 March 1993 (1993-03-10) cited in the application page 3, line 56 -page 4, line 50 page 5, line 14 -page 7, line 25; claims 1-20	1-21
	-/-	



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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 21 28 613 A (W. FALLER) 28 December 1972 (1972-12-28) page 5, paragraph 3 -page 6, paragraph 1; claims 1-15 ----	1-21
A	GB 1 091 105 A (THE DEXTER CORPORATION) 15 November 1967 (1967-11-15) claims 1-14 ----	1
A	DE 44 17 244 A (COLPARK LTD.) 24 November 1994 (1994-11-24) the whole document ----	1
A	EP 0 850 567 A (ERIKSSON CAPITAL AB) 1 July 1998 (1998-07-01) the whole document ----	1
A	FR 1 558 603 A (UCC) 28 February 1969 (1969-02-28) cited in the application page 7 -----	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/04418

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9510190	A	20-04-1995	AU 7818594 A GB 2297097 A,B	04-05-1995 24-07-1996
EP 819725	A	21-01-1998	US 5747125 A BR 9704014 A CA 2200639 A CZ 9702237 A JP 10080942 A NO 971850 A	05-05-1998 29-09-1998 18-01-1998 18-02-1998 31-03-1998 19-01-1998
EP 531097	A	10-03-1993	US 5300319 A DE 69218072 D DE 69218072 T FI 923971 A JP 5321112 A US 5419962 A	05-04-1994 17-04-1997 09-10-1997 06-03-1993 07-12-1993 30-05-1995
DE 2128613	A	28-12-1972	NL 7207782 A	12-12-1972
GB 1091105	A		NONE	
DE 4417244	A	24-11-1994	EP 0710443 A ZA 9403397 A	08-05-1996 09-02-1995
EP 850567	A	01-07-1998	FI 965212 A JP 10229810 A	28-06-1998 02-09-1998
FR 1558603	A	28-02-1969	BE 710164 A CH 483200 A DE 1719297 A DK 141861 B FI 51978 B GB 1222421 A IT 943035 B NL 6801433 A,B NO 129047 B SE 351856 B US 3484256 A	31-07-1968 31-12-1969 13-01-1972 07-07-1980 31-01-1977 10-02-1971 02-04-1973 01-08-1968 18-02-1974 11-12-1972 16-12-1969